

Application No.: 10/500,240
Amendment Date: 19-Dec-07
Reply to Office Action of: 19-Jun-07

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claim 1 (Currently amended): A method for producing a recombinant glycoprotein in a ~~non-human eukaryotic unicellular or filamentous fungus~~ host cell that expresses a glycosidase activity, the method comprising the step of diminishing or depleting the activity of one or more enzymes in the host cell that transfers a sugar residue to the 1,6 arm of a lipid-linked oligosaccharide structure, and introducing into the host cell one or more nucleic acids encoding an α -1,2-mannosidase and a GnT I activity; wherein said method results in the production within the host cell of recombinant glycoproteins having N-glycans attached thereto comprising GlcNAcMan_XGlcNAc₂ core structures, wherein X is ~~3, 4, or 5~~ 3 or 4.

Claim 2 (Previously presented): The method of claim 1, wherein the at least one glycosidase activity is expressed from a nucleic acid molecule introduced into the host cell.

Claim 3 (Previously presented): The method of claim 2, wherein the at least one glycosidase activity is a mannosidase activity.

Claim 4 (Canceled)

Claim 5 (Canceled)

Claim 6 (Currently amended): The method of claim 1, further comprising the step of expressing within the host cell one or more glycosidase enzyme activities, ~~selected from glycosidase and glycosyltransferase activities~~, to produce a GlcNAc₂Man₃GlcNAc₂ structure.

Claim 7 (Previously presented): The method of claim 6, wherein the one or more enzyme activities is selected from α -1,2 mannosidase, α -1,3 mannosidase and GnTII activities.

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Claim 8 (Previously presented): The method of claim 1, wherein at least one diminished or depleted enzyme is selected from the group consisting of an enzyme having dolichyl-P-Man:Man₅GlcNAc₂-PP-dolichyl alpha-1,3 mannosyltransferase activity; an enzyme having dolichyl-P-Man:Man₆GlcNAc₂-PP-dolichyl alpha-1,2 mannosyltransferase activity and an enzyme having dolichyl-P-Man:Man₇GlcNAc₂-PP-dolichyl alpha-1,6 mannosyltransferase activity.

Claim 9 (Previously presented): The method of claim 1, wherein the diminished or depleted enzyme has dolichyl-P-Man:Man₅GlcNAc₂-PP-dolichyl alpha-1,3 mannosyltransferase activity.

Claim 10 (Previously presented): The method of claim 1, wherein the enzyme is diminished or depleted by mutation of a host cell gene encoding the enzymatic activity.

Claim 11 (Previously presented): The method of claim 10, wherein the mutation is a partial or total deletion of a host cell gene encoding the enzymatic activity.

Claim 12 (Previously presented): The method of claim 1, wherein the attached N glycans have seven or fewer mannose residues.

Claim 13 (Canceled)

Claim 14 (Previously presented): The method of claim 1, wherein the glycoprotein comprises one or more sugars selected from the group consisting of galactose, GlcNAc, sialic acid, and fucose.

Claim 15 (Previously presented): The method of claim 1, wherein the glycoprotein comprises at least one oligosaccharide branch comprising the structure NeuNAc-Gal-GlcNAc-Man.

Claim 16 (Canceled)

Claim 17 (Previously presented): The method of claim 1, wherein the host cell is selected from the group consisting of *Pichia pastoris*, *Pichia finlandica*, *Pichia trehalophila*,

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Pichia koclamae, *Pichia membranaefaciens*, *Pichia opuntiae*, *Pichia thermotolerans*, *Pichia salictaria*, *Pichia guercuum*, *Pichia pijperi*, *Pichia stiptis*, *Pichia methanolica*, *Pichia sp.*, *Saccharomyces cerevisiae*, *Saccharomyces sp.*, *Hansenula polymorpha*, *Kluyveromyces sp.*, *Candida albicans*, *Aspergillus nidulans*, *Aspergillus niger*, *Aspergillus oryzae*, *Trichoderma reesei*, *Chrysosporium lucknowense*, *Fusarium sp.*, *Fusarium gramineum*, *Fusarium venenatum* and *Neurospora crassa*.

Claims 18-58 (Cancelled)

Claim 59 (Previously presented): A method for producing a human-like glycoprotein in a non-human eukaryotic host cell comprising the step of diminishing or depleting from the host cell an *alg* gene activity and introducing into the host cell at least one glycosidase activity.

Claims 60-65 (Cancelled)